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## **USAID Evaluation Special Study No. 74**

### **What Do We Know About World Poverty?**

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## **What Do We Know About World Poverty?**

Are the lives of ordinary people in the developing world becoming worse or better? The widely held answer seems to be that poverty is increasing. Yet, there has been a steady and dramatic improvement in indicators of the quality of life for ordinary people in developing countries in the last 40 years.

The assertion that extreme poverty is on the rise is a standard feature of published commentary. For example, the July–August 1994 issue of *World Watch*, published by Lester Brown’s Worldwatch Institute, announced on its cover: “After 50 years of big World Bank loans, the developing world has—by most measures—only grown poorer.” Despite the commonplace character of such assertions, there has been little effort to look at this issue over sufficiently long periods of time to observe the broad sweep of trends. This paper attempts to fill that gap by bringing together the best available data on indicators of poverty from 1950 through 1990.

Usually, wide variations in perceptions about trends reflect differences in measurements used or differences in perceptions about the validity of alternative measurements. This is not the case here. Observers with a wide variety of perspectives all appear to draw on the same basic data sets—those collected by the United Nations and its specialized agencies—in making judgments. The bibliography lists a series of recent UN publications that, together with earlier work by the UN, have provided the basic data on which this study is based. It also lists assessments of development by outside groups (Bread for the World, the Worldwatch Institute, the World Resources Institute). A review of these independent viewpoints on development trends shows no dissent from the UN data sources. All use these UN sources extensively, and none identifies

significant discrepancies between the data used by the UN and the underlying trends these other organizations see.<sup>1</sup>

The approach of this study is to examine the main social indicators for which data are available for decadal intervals between 1950 and 1990. Where appropriate, both the *percentage* of people in poverty and the *absolute number* of poor are considered for both the world as a whole and for developing countries. The focus is on developing countries taken together, although a limited discussion of regional differences is also included.<sup>2</sup>

## How Can We Measure Poverty?

Economists typically give a shorthand answer to this question—they measure it by income. And by income, the economist typically means income in money. Money income can be used for each household in the country, or the world, and can be related to the amount required to purchase a “minimum” package of goods and services, such as food, clothing, and shelter. Those whose incomes are below this level are poor.

Tracking such data over time answers the big questions. The alacrity with which economists produce such numbers, however, obscures basic problems—some conceptual, some practical—in relating money incomes to real quality of life across widely differing cultures, economic arrangements, and average income levels. This paper does not examine the income dimension. It looks only at basic social conditions that money and other resources make possible.

The approach is based on the commonly held assumptions that

Longer life is preferable

Higher nutrition intake, at least for those with low levels of intake, is preferable

Literacy opens up a wider world of access to the accumulated knowledge of humanity, and is to be preferred to illiteracy

Freedom is preferable to servitude

## Overall Trends

### Infant Deaths

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*What do trends show?* For developing countries as a group, as shown in table 1, infant mortality has declined from 180 per thousand births in 1950–55 to 69 per thousand in 1990–95. Put another way, infant deaths have fallen from nearly 1 out of every 5 babies to less than 1 in 14. Though the number of babies born annually worldwide has more than doubled during the period, the absolute number of infant deaths has declined steadily. Annual infant deaths in developing countries fell from 14.2 million per year in the early 1950s to 8.7 million in the early 1990s. The pattern of decline, in average percentage decline per year, was fairly consistent throughout the period. The decline was slightly above average in the 1980s and was slowest in the 1970s.

If infant mortality had remained at the 1950–55 rate, the number of annual deaths in the 1990s would have been 22.7 million. In this sense, improved conditions have averted 14 million infant deaths per year in developing countries. From another viewpoint, one could consider underdevelopment the cause of higher infant mortality rates in developing countries. Eliminating the “infant-mortality gap” between developed and developing countries would reduce annual infant deaths by an additional 7.2 million. Although the gap still exists, it has narrowed. Infant mortality has fallen faster in developing countries than in developed ones. This decline has been general—all countries have experienced it—although it has fallen much faster in some countries than in others.

*Reliability.* The UN has been the basic repository for data on population variables. While disputes have arisen regarding trends in individual countries, there seems to be no significant difference of opinion on general trends. The UN data seem to have universal acceptance as reflecting underlying realities.

Measurement of infant mortality in poor countries is typically deficient because registration of births and infant deaths is frequently incomplete. Nevertheless, longer term trends will tend to appear in other indicators, notably population size and age distribution. Using census data, checks for consistency among population growth variables should yield reasonably accurate estimates of infant mortality. In addition, extensive surveys promoted by donors since the 1970s have provided country-level cross-checks for estimates from other sources. In particular, USAID-funded demographic and health surveys have used carefully designed samples to estimate national data.

In a broad sense, the population explosion of the past several decades is the clearest indication that infant mortality fell substantially in developing countries. There is no broad evidence of increased fertility—the evidence is strongly in the direction of lower fertility rates—so the rapid population growth must have come from increased survival of children.

*Implications.* Infant mortality is generally viewed by experts as a useful proxy for broader health and well-being measures. If starvation is endemic among the larger population, more babies will die, or in extreme cases, become victims of infanticide. When fewer infants die, it reflects a broader improvement in living conditions.

*Conclusion.* The decline in infant mortality is a widespread and significant trend in developing countries that reflects a real improvement in the quality of life.

## **Life Expectancy**

*What do trends show?* The UN reports that average life expectancy at birth in developing countries increased from 40.7 years in 1950–1955 to 62.4 years in 1990–95 (table 2A). This means that each year, on average, life expectancy has increased by more than six months. The increase was persistent throughout the period, though the percentage increase in life expectancy declined steadily as life expectancy has lengthened.

*Reliability.* The life expectancy data are derived in large part from census data. In developing countries, these are subject to errors of undercounting—though even a seriously deficient census can be treated as a very large (90 to 95 percent) sample survey. Even with underenumeration, censuses are likely to reflect accurately the age distribution of the population.

*Implications.* Some of the increase in life expectancy was due specifically to the decline in infant mortality, since this is the primary source of premature death. Because of this linkage, life expectancy at birth, the standard measure, is not truly independent of infant mortality trends. Life expectancy at age 1, shown in table 2B, eliminates this influence. By this measure, the average lifespan in developing countries has increased by 17.5 years during the past 4 decades. The gap between the developed and developing country averages has narrowed over the period from 20 years to 8.5 years.

*Conclusion.* Life expectancy has increased dramatically in developing countries, even eliminating the influence of the sharp decline in infant mortality. The average 1-year-old in developing countries in the early 1990s can expect to live to the age of 66—as long as a child born in a developed country in the 1940s.

## **Food and Nutrition**

*What do trends show?* Three basic kinds of information can be used to assess food and nutrition trends: aggregate per-capita food availability data collected at national and world levels; household surveys, which give more detailed data on actual food consumption at the household level; and anthropometric data—primarily information on height and weight at different ages.

*Aggregate food availability.* Basic data on food production and availability are produced by the Food and Agriculture Organization of the UN. Food production has outgrown population increases during the past 4 decades, which means per capita food consumption has been rising. Altogether, it has risen by about 35 percent since 1950. During the past 3 decades it has risen 4 to 5 percent per decade.

While food production data are available from 1950 onward, widespread data on trends in caloric intake for most countries are reported in the basic sources only from 1961. There are two main approaches to the data. First, as shown in table 3A, one can look at average per capita calorie consumption data for developed and developing countries. Per capita calorie consumption in developing countries increased each decade, but with some variation: slowly in the 1960s, rapidly in the 1970s, and at an intermediate rate during the 1980s.

A second approach considers average caloric intake by country, as shown in tables 3B and 3C. These tables report the number of people in countries where average daily calorie consumption falls into broad classes. The share of world population living in countries where the average daily consumption was below 2,200 calories per person fell from 57 percent in 1961 to 11 percent in 1990. The number of people in countries where the average was above 2,600 rose from 30 percent of the world population to 62 percent.

*Household surveys.* Surveys at the household level provide a more accurate measure of the adequacy of food consumption than aggregate trends, because the distribution of food consumption within the society can be measured. Household surveys have increasingly been used to track consumption over time. Aggregating national surveys to obtain a picture of the state of nutrition in developing countries generally has been difficult, however. The U.N., in its second report on world nutrition, provides only two data-points: the mid-1970s and 1988–90 (table 3D). This report estimates that 33 percent of the developing country population in 1975, or 976 million people, suffered from serious malnutrition, defined as having an energy intake during the year of less than 154 percent of the basic metabolic requirement. The basic metabolic requirement is the energy intake required for maintenance without physical activity. By 1988–1990, the seriously malnourished in developing countries fell to 20 percent of the total, or 786 million. This seems to be about the same proportion as was seriously malnourished in England at the beginning of the 19th century (see Fogel 1994).

*Anthropometric data.* Anthropometric measurements—notably, measurements of height and weight in relation to age—provide the most accurate testing of nutritional adequacy. These *outcome* measurements are more valuable than input measures like calorie consumption, because the need for calories is affected by other variables, including state of health and level of activity.

This tool has come into general use only in recent years, however, so worldwide anthropometric trends for the overall population are not available. Most of the earliest national surveys of growth patterns for individual developing countries date from about 1975. Nevertheless, comparative data from two or more national surveys (usually between one date in the late 1970s or early 1980s and another in the late 1980s) are available for 29 developing countries that include about 2 billion people. That accounts for two thirds of the population of all developing countries excluding China, for which no surveys were available. Twenty-five of the countries, including more than 98 percent of the population of the sample, showed falling rates of malnutrition based on weight-for-age measurements. A trend of high and static or rising rates of malnutrition was confined to three African countries—Rwanda, Togo, and Zambia.

From the limited survey work, the UN has estimated that the percentage of seriously underweight children in developing countries fell from 42 percent in the mid-1970s to 34 percent by 1988–90 (table 3D). Because of the continued growth in population, the absolute number of malnourished children climbed from 168 million to 184 million. The higher overall number of malnourished children reflected increases in Africa and South Asia of around 10 million each, with declines in absolute numbers elsewhere.

*Reliability.* There seems to be little disagreement on the historical trends in food production or caloric intake. The principal controversy relates, as it has in the past, to expected future trends.

*Implications.* The improvement in nutrition over time probably reflects several factors, including higher productivity in agriculture, lower transportation costs, and better techniques for preserving food. The growth in agricultural productivity reduced by about half real prices of the three basic grains—wheat, rice, and corn—between the late 1950s and the early 1990s. Over the past century the fall in prices has been even steeper: since 1850, maize prices have fallen by about 80 percent in constant dollars.

Despite this favorable trend, numerous observers, notably Lester Brown, have warned that the past is no safe basis for predicting future trends. They contend that future trends are likely to be unfavorable. A major issue is whether the green revolution was an isolated case of serendipity that postponed a crisis, or one of a series of examples of humanity's capacity to increase agricultural productivity through scientific progress.

The fear of future agricultural calamity has a long history, impervious to actual trends. Mark Twain's observation that it is hard to make predictions, especially about the future, is relevant here. There has been substantial progress in food availability during the past several decades and a significant decline in the real price of basic agricultural commodities, particularly since 1980. Whether these trends will continue is uncertain. Economists generally would argue that higher prices would stimulate any needed increase in production. Such an increase, however, would be likely to adversely affect the nutritional intake of much of the world's poor—just as the low prices of the 1980s were favorable to them.

*Conclusion.* The data suggest that average people in poor countries are eating a more adequate diet than at any previous time in recorded history.

## **Education and Literacy**

*What do trends show?* The United Nations Educational, Scientific, and Cultural Organization (UNESCO) reports that adult literacy has increased from 56 percent of the world population in 1950 to 75 percent in 1990 (table 4A). Literacy is almost universal in the developed countries and rose from 35 percent to 67 percent between 1950 and 1990 in the developing countries. The number of literate people in developing countries increased more than sevenfold during the period (table 4B). The number of illiterates in the world peaked around 1980 at about 946 million and has been declining since (table 4C). UNESCO's projection for the year 2000, shown in the tables, indicates the expected continuation of this trend. The overall literacy rate increased faster in the 1980s than in previous decades, reflecting entry into the adult population of people in whom education investments were made earlier, as well as the gradual dying off of older illiterate people.

The reason for the decline in illiteracy appears to owe much more to extension of education to children than to an increase in literacy of people once they reach adulthood (table 5). The reach of formal education systems for children has increased dramatically since 1950. For the world as a whole, school enrollments at all levels grew from about 250 million in 1950 to 500 million in 1970 and to nearly 1 billion in 1990. In other words, 19 percent of the entire world population was in school in 1990!

The explosion of formal education in developing countries is perhaps the most striking characteristic of the post–World War II world. Total enrolled students rose from about 100 million in 1950 to 738 million in 1990. The growth occurred first at the elementary level, where the student population in 1950 was 38 percent of the primary-aged population, to 78 percent by 1970, and around 97 percent in 1990 (table 6). (The participation rate is swelled by the presence of out-of-age students in primary schools.) The net enrollment rate is estimated to be about 85 percent. Secondary education in

1950 was the province of a very small elite, with about 5 percent of the relevant age group enrolled in school. By 1990, enrollments were half of the relevant population.

*Reliability.* The UN data on education are subject to several types of error. First, enrollment numbers may be misrepresented. For example, they may represent initial enrollments at the beginning of the school year. There may be large numbers of dropouts as the school year progresses. Local teachers or regional offices may inflate enrollment to obtain additional funding. Also, enrollment numbers do not necessarily reflect the quality of education provided. Finally, UNESCO's world enrollment data have excluded individual countries (notably China, North Korea, and South Africa) from its world totals for individual years. We have attempted to correct for these omissions, but the data may reflect errors in this adjustment.

For purposes of viewing broad trends over time, these errors are not likely to be major factors. There is no indication that overreporting has increased with time, or that quality of education provided has declined. It seems more likely that quality and reliability of the data gradually have increased over time as the explosive growth of educational institutions has slowed, as bureaucratic systems have been established, and as the density of the population of educated people from which teachers are drawn has increased.

*Implications.* The great mass of the world's population entering working age is now literate, a dramatic difference over any previous time in history. Better education has been shown to be linked to a wide variety of other variables—health practices, willingness to innovate, education aspirations for one's children, family planning, and productivity. That suggests that the potential for continued progress resulting from the past investments in children is quite favorable.

*Conclusion.* Literacy and basic education have continued to spread rapidly in the developing world. Once the domain of an elite minority, literacy is now accessible to the great majority of children in developing countries. More remains to be done on quality improvement, but the quantitative issue—adequate numbers of teachers and schoolrooms—has largely been overcome in most developing countries.

## **Freedom**

Freedom from subjection is an important dimension of social welfare. Nevertheless, measurement is difficult, partly because so many dimensions of freedom are identifiable. Here the term is used in the reduced sense that eliminates the political dimension (speech, press, power to choose political leaders) and concentrates on the individual's ability to establish one's own household and pursue a desired occupation.



Even on this narrower basis, there is no simple way to measure trends over time. Consequently, this section will be limited to some general observations.

For most of history, most of the world's population has lacked these freedoms. Agricultural workers, who constitute most workers, were tied to the land by a variety of feudal arrangements,<sup>3</sup> and members of the community were tied together in tight webs of mutual obligation based on tradition. The most extreme forms of servitude were eliminated in the 19th century, but severe forms were still widespread in Asia and some parts of Latin America into the present century. These have gradually declined but are still present in some countries. Restrictions on the geographic mobility of rural residents likewise appear to have steadily declined. China is the only major country at present that severely restricts internal migration. The rapid growth of cities in many parts of the world is one manifestation of this growing freedom.

Conditions facing women have been far more onerous than for men. In most societies, women have been constrained to remain in the patriarchal household until married (frequently without their consent) and then subjected to inferior status in the marriage relationship. As W. Arthur Lewis, the only Nobelist in economics from the Third World, has written:

In most underdeveloped countries woman is a drudge, doing in the household tasks which in more advanced societies are done by mechanical power—grinding grain for hours, walking miles to fetch pails of water, and so on. Economic growth transfers these and many other tasks—spinning and weaving, teaching children, minding the sick—to external establishments, where they are done with greater specialization and greater capital, and with all the advantages of large scale production. In the process woman gains freedom from drudgery, is emancipated from the seclusion of the household, and gains at least the chance to be a full human being, exercising her mind and her talents in the same way as men. It is open to men to debate whether economic progress is good for men or not, but for women to debate the desirability of economic growth is to debate whether women should have the chance to cease to be beasts of burden and to join the human race.<sup>4</sup>

## **Regional Variations**

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So far, the discussion of improvements in social indicators over the past four decades has looked only at developing countries taken together. A detailed review of the trends at the country and regional levels is beyond the scope of this paper. The variations among countries and regions, however, have been substantial. It seems likely that the differential progress results from two separate strands. First, progress in indicators throughout the world comes from broader education and access to a growing worldwide store of knowledge.

Second, differences in economic growth among regions allow poor people in some countries greater opportunities. They benefit from higher incomes, more effective government promotion of development, and a greater social infrastructure, made possible by a larger overall amount of resources available to the society. In effect, people in all countries have benefited from increased knowledge; poor people in some countries have benefited in addition from rapid economic growth.

Chart I offers a partial insight into the effect of these differences. Three geographic regions—Africa, South Asia, and East Asia—all began in the 1950s at approximately the same starting point for infant mortality, with a rate of about 180 per thousand. Since then, South Asia and Africa have had disappointing rates of economic growth. East Asia, however, has had extremely rapid economic growth, drawing on market-based economic policies and extensive investment in education. All three regions reduced infant mortality, cutting the rate by half or more. Nevertheless, East Asia's progress has been *spectacular*, while progress in the other regions has been only *substantial*. East Asian rates of infant mortality in the early 1990s were similar to those in the developed countries in the late 1960s.

## What Do the Long-Term Trends Tell Us?

This four-decade review of social trends suggests that the longer term trends are much more positive than the public in developed countries has generally perceived. It is even more remarkable that this considerable progress has taken place in the face of the most rapid population growth rates in developing countries in the history of the world—rates that peaked in the 1970s and have been declining since.

The trends documented here might be a source of pride. Humanity has made unprecedented progress since 1950 against those conditions—illiteracy, malnutrition, subjection, and premature death—that have been the lot of the majority of the world's population throughout history.

The fact that the Somalias and Rwandas capture the front pages may contribute to the misperception about this progress. Another source may be the continued existence of large-scale poverty. If there are still millions of poor people, it is argued, development efforts must have failed. This reasoning is flawed: the magnitude of the task remaining should not obscure the progress already made. Whatever its sources, the misperception has consequences.

First, it promotes pessimism about human prospects. Gloomy predictions have been around at least since the days of Dr. Malthus. They are most credible when they are simply seen as extensions of past trends—where the prognosticator does not have to defend a change in direction. Forecasts of impending global calamity, such as the recent one by Paul Kennedy and Matthew Connelly,<sup>5</sup> often make no effort to prove that future trends in poor countries will be a departure from those in the past, nor to show that past trends have been negative. They simply assume that readers share their belief that conditions in developing countries have been deteriorating for decades.

Second, and more important, it contributes to a pessimism about international development efforts. Some of the opposition to foreign aid in Congress and by the public surely reflects frustration that international aid seems to have been ineffective and that ordinary people in poor countries are worse off than in the past.

A recognition that the international effort is achieving real progress might reduce “aid fatigue” by the public and Congress. It might also energize people to new and more creative ways of addressing the problems of world poverty. Failure and gloom immobilize; progress energizes.

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# Notes

<sup>1</sup> This is a separate issue from that of the underlying validity of the indicators. Agreement is not the same as truth. Therefore, the issue of underlying validity will be examined for each of the indicators considered.

<sup>2</sup> Throughout the paper, the developing countries include those in Africa, the Middle East, Latin America and the Caribbean, and Asia, except Japan. Eastern Europe and the former USSR are included with the developed countries.

<sup>3</sup> Some writers have romanticized some feudal arrangements as providing greater security to workers because of the web of mutual obligations that required the lord to be concerned about the welfare of his subjects. The fact that such arrangements have disappeared whenever their compulsory character ended strongly suggests that the benefits were one-sided in favor of the lord.

<sup>4</sup> W. Arthur Lewis, *The Theory of Economic Growth*, p. 455, Richard T. Irwin, Homewood, Ill. 1955.

<sup>5</sup> Atlantic Monthly, "Must It be the West Against the Rest?" December 1994.